<center>**IN THE CLAIMS**</center>

Listing of Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Claim 1 (Cancelled):

Claim 2 (Currently Amended):—An apparatus for automating cross calibrations of plant instruments, said apparatus comprising:

a processor in communication with a data storage system, said data storage system being a part of a plant monitoring system, said processor programmed to execute a process including

loading a data set from said data storage system, said data set including a plurality of measured process values from a plurality of instruments, said plurality of instruments including at least one redundant instrument, said plurality of measured process values including a plurality of temperature measurements obtained during isothermal conditions, ~~The apparatus of Claim 1~~ wherein said process step of loading a data set includes selecting a file, loading a set of resistance temperature device (RTD) data, calculating RTD averages from said set of RTD data, loading a set of thermocouple data, calculating thermocouple averages from said set of thermocouple data, and matching timeslices~~,~~.

selecting for analysis a set of data from said data set,

removing a set of deviating data from said set of data,

analyzing a set of remaining data for cross-calibration, and

recalibrating any one of said plurality of instruments that produce at least one data point in said set of deviating data.

Claim 3 (Cancelled):

Claim 4 (Currently Amended): <u>An apparatus for automating cross calibrations of plant instruments, said apparatus comprising:</u>

<u>a processor in communication with a data storage system, said data storage system being a part of a plant monitoring system, said processor programmed to execute a process including</u>

<u>loading a data set from said data storage system, said data set including a plurality of measured process values from a plurality of instruments, said plurality of instruments including at least one redundant instrument, said plurality of measured process values including a plurality of temperature measurements obtained during isothermal conditions,</u>

<u>selecting for analysis a set of data from said data set,</u>

<u>removing a set of deviating data from said set of data,</u> ~~The apparatus of Claim 1~~ wherein said process step of removing said set of deviating data includes calculating an average narrow range standard deviation value, calculating a fluctuation standard deviation value of average narrow range fluctuations, rejecting a timeslice for said fluctuation standard deviation outside a specified range, and matching thermocouple times to resistance temperature device (RTD) times,~~.~~

<u>analyzing a set of remaining data for cross-calibration, and</u>

<u>recalibrating any one of said plurality of instruments that produce at least one data point in said set of deviating data.</u>

Claim 5 (Currently Amended): <u>An apparatus for automating cross calibrations of plant instruments, said apparatus comprising:</u>

<u>a processor in communication with a data storage system, said data storage system being a part of a plant monitoring system, said processor programmed to execute a process including</u>

<u>loading a data set from said data storage system, said data set including a plurality of measured process values from a plurality of instruments, said</u>

plurality of instruments including at least one redundant instrument, said plurality of measured process values including a plurality of temperature measurements obtained during isothermal conditions, ~~The apparatus of Claim 1~~ wherein said set of data includes a set of resistance temperature device (RTD) data and a set of thermocouple data, said process step of analyzing said set of remaining data includes calculating a set of RTD deviations from said set of RTD data, calculating an average value and a standard deviation value from said set of RTD deviations, calculating a set of thermocouple deviations from said set of thermocouple data, and calculating an average of said set of thermocouple deviations.

selecting for analysis a set of data from said data set,

removing a set of deviating data from said set of data,

analyzing a set of remaining data for cross-calibration, and

recalibrating any one of said plurality of instruments that produce at least one data point in said set of deviating data.

Claims 6 - 12 (Cancelled):

Claim 13 (Previously presented):   An apparatus for automating cross calibrations of plant instruments, said apparatus comprising:

a processor in communication with a data storage system, said data storage system being a part of a plant computer system, said processor programmed to execute a process including:

loading a data set from said data storage system, said data set including a plurality of measured process values from a plurality of instruments,

selecting for analysis a set of data from said data set, said set of data including a set of resistance temperature device (RTD) data and a set of thermocouple data,

removing a set of deviating data from said set of data, and

analyzing a set of remaining data for cross-calibration of said plurality of instruments, said process step of analyzing further including calculating a set of RTD deviations from said set of RTD data, calculating an average value and a standard deviation value from said set of RTD deviations, calculating a set of thermocouple deviations from said set of thermocouple data, and calculating an average of said set of thermocouple deviations, said set of thermocouple deviations stored for reporting of said set of thermocouple deviations.

Claim 14 (cancelled):

Claim 15 (Previously presented):   An apparatus for automating cross calibrations of plant instruments, said apparatus comprising:

a processor in communication with a data storage system, said data storage system being a part of a plant computer system, said processor programmed to execute a process including:

loading a data set from said data storage system, said data set including a plurality of measured process values from a plurality of instruments,

wherein said process step of loading a data set includes selecting a file, loading a set of resistance temperature device (RTD) data, calculating RTD averages from said set of RTD data, loading a set of thermocouple data, calculating thermocouple averages from said set of thermocouple data, and matching timeslices.

selecting for analysis a set of data from said data set,

removing a set of deviating data from said set of data, and

analyzing a set of remaining data for cross-calibration of said plurality of instruments with a set of results of said step of analyzing stored for reporting of said set of results.

Claims 16-51 (cancelled):

Claim 52 (Currently Amended): <u>An apparatus for automating cross calibrations of plant instruments, said apparatus comprising:</u>

<u>a processor in communication with a data storage system, said data storage system being a part of a plant computer system, said processor programmed to execute a process including:</u>

<u>retrieving a data set from said data storage system, said data set including a plurality of measured process values from a plurality of instruments,</u>

~~The apparatus of Claim 51 further including, after said step of retrieving said data set, a process step of~~ <u>sorting</u> said data set<u>,</u>~~.~~

<u>determining at least one average value from said data set,</u>

<u>determining a set of deviating data from said data set, and</u>

<u>determining new coefficients for any one of said plurality of instruments that produce at least one data point in said set of deviating data, said new coefficients stored for reporting of said new coefficients.</u>

Claims 53-94 (cancelled):

Claim 95 (Currently Amended): <u>Computer readable media tangibly embodying a program of instructions executable by a computer to perform a method of automating cross calibrations of plant instruments, said method comprising:</u>

<u>(a) retrieving a data set from a data storage unit, said data storage unit being a part of a plant monitoring system, said data set including a plurality of measured process values from a plurality of resistance temperature device (RTD) instruments;</u>

<u>(b) selecting for analysis a set of data from said data set;</u>

<u>(c) removing a set of deviating data from said set of data to produce a set of remaining data,</u> ~~The method of Claim 94~~ <u>wherein said step of removing said set of deviating data includes calculating an average narrow range standard deviation value,</u>

calculating a fluctuation standard deviation value of average narrow range fluctuations, rejecting a timeslice for said fluctuation standard deviation outside a specified range, and matching thermocouple times to RTD times~~;~~.

(d) analyzing said set of remaining data; and

(e) recalibrating any one of said plurality of instruments that produce at least one data point in a set of deviating data produced from said step (d) of analyzing.

Claim 96 (Currently Amended): Computer readable media tangibly embodying a program of instructions executable by a computer to perform a method of automating cross calibrations of plant instruments, said method comprising:

(a) retrieving a data set from a data storage unit, said data storage unit being a part of a plant monitoring system, said data set including a plurality of measured process values from a plurality of resistance temperature device (RTD) instruments, ~~The method of Claim 93~~ wherein said step (a) of loading a data set includes selecting a file, loading a set of RTD data, calculating RTD averages from said set of RTD data, loading a set of thermocouple data, calculating thermocouple averages from said set of thermocouple data, and matching timeslices~~;~~.

(b) selecting for analysis a set of data from said data set;

(c) analyzing a set of remaining data from said set of data after any deviate data is removed; and

(d) recalibrating any one of said plurality of instruments that produce at least one data point in a set of deviating data produced from said step (d) of analyzing.

Claim 97 (Cancelled):

Claim 98 (Currently Amended): Computer readable media tangibly embodying a program of instructions executable by a computer to perform a method of automating cross calibrations of plant instruments, said method comprising:

(a) retrieving a data set from a data storage unit, said data storage unit being a part of a plant monitoring system, said data set including a plurality of measured process values from a plurality of resistance temperature device (RTD) instruments;

(b) selecting for analysis a set of data from said data set, ~~The method of Claim 93~~ wherein said set of data includes a set of RTD data and a set of thermocouple data;~~,~~

(c) analyzing a set of remaining data from said set of data after any deviate data is removed, wherein said step (c) of analyzing said set of remaining data includes calculating a set of RTD deviations from said set of RTD data, calculating an average value and a standard deviation value from said set of RTD deviations, calculating a set of thermocouple deviations from said set of thermocouple data, and calculating an average of said set of thermocouple deviations.; and

(d) recalibrating any one of said plurality of instruments that produce at least one data point in a set of deviating data produced from said step (d) of analyzing.

Claim 99 (Cancelled):

Claim 100 (Cancelled):

Claim 101 (Cancelled):